

Application No.: 10/803,153  
Amendment and Response dated May 27, 2008  
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**Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the subject application, and please amend the claims as follows:

Claim 1. (Currently amended): An endovascular graft for supporting a preselected length of a patient's body lumen comprising:

a plurality of separate thin wall graft members configured to be layered in a deployed state with at least two of the thin wall graft members having a length greater than the preselected length of the patient's body lumen;

wherein the at least two of the thin wall graft members completely overlap the preselected length of the patient's body lumen, the preselected length including a lesion in patient's body lumen;

wherein no single thin wall graft member has sufficient mechanical strength in a deployed state to provide a desired amount of support for the preselected length of a patient's body lumen; and further

wherein the thin wall graft members are configured to provide sufficient mechanical strength to provide a desired amount of support for the preselected length of the patient's body lumen ~~in portions of the graft where~~ the at least two of the thin wall graft members ~~are~~ completely overlapped overlap the lesion in the patient's body lumen.

Claims 2-3. (Canceled)

Claim 4. (Currently amended): The endovascular graft of claim 1 wherein the graft comprises at least three thin wall graft members and the thin wall graft members are configured to provide sufficient mechanical strength to provide a desired amount of support for the preselected portion of the patient's body lumen only in portions of the graft where all of the

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thin wall graft members are completely overlapped overlap the lesion in the patient's body lumen.

Claim 5. (Original): The graft of claim 1 wherein an inner most thin wall graft member has an axial length substantially greater than all other thin wall graft members such that the inner-most thin wall graft member can extend longitudinally beyond a distal end and a proximal end of all other thin wall graft members when deployed.

Claim 6. (Original): The graft of claim 1 wherein the thin wall graft members are configured to be expanded to a transverse dimension of up to about 40 mm and constrained to a maximum outer transverse dimension of down to about 3 mm.

Claim 7. (Original): The graft of claim 1 wherein the separate thin wall graft members are individually deliverable.

Claim 8. (Original): The graft of claim 1 wherein each thin wall graft member further comprises an anchoring mechanism at both ends and at least two of the thin wall graft members have a longitudinal length sufficient to span the preselected length of the patient's body lumen and engage tissue of sufficient integrity to support the anchoring mechanisms at both ends of the at least two thin wall graft members.

Claim 9. (Currently amended): A method of deploying an endovascular graft within a body passageway of a patient comprising:

- a) providing an endovascular graft comprising at least two thin wall graft members configured to be layered in a deployed state;
- b) percutaneously delivering a first thin wall graft member through a low profile delivery catheter system to a desired site within a passageway of a patient's body and deploying the first thin wall graft member at the desired site, wherein the first thin wall graft

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member does not have sufficient mechanical strength in the deployed state to provide a desired amount of support to the passageway of the patient's body at the desired site, and wherein the first thin wall graft member completely overlaps a lesion in the passageway of the patient's body at the desired site;

c) percutaneously delivering a second thin wall graft member through a low profile delivery catheter system and positioning the second thin wall graft member within a longitudinal lumen of the deployed first thin wall graft member, wherein the second thin wall graft member does not have sufficient mechanical strength in the deployed state to provide a desired amount of support to the passageway of the patient's body at the desired site; and

d) deploying the second thin wall graft member ~~completely~~ within the longitudinal lumen of the deployed first thin wall graft member to provide sufficient mechanical strength to provide a desired amount of support to the passageway of the patient's body at the desired site, wherein the second thin wall graft member completely overlaps the lesion in the passageway of the patient's body at the desired site.

Claim 10. (Previously presented): The method of claim 9 wherein second thin wall graft member extends longitudinally beyond the first thin wall graft member and engages the artery wall directly.

Claim 11. (Currently amended): A method of deploying an endovascular graft within a body passageway of a patient comprising:

a) providing an endovascular graft comprising at least two thin wall graft members configured to be layered in a deployed state;

b) percutaneously delivering a first thin wall graft member through a low profile delivery catheter system to a preselected site within a passageway of a patient's body, wherein the first thin wall graft member does not have sufficient mechanical strength in the deployed state to provide a desired amount of support to a lesion in the passageway of the patient's body at the preselected site;

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c) percutaneously delivering a second thin wall graft member through a low profile delivery catheter system and positioning the second thin wall graft member within a longitudinal lumen of the first thin wall graft member, wherein the second thin wall graft member does not have sufficient mechanical strength in the deployed state to provide a desired amount of support to the lesion in the passageway of the patient's body at the preselected site; and

d) deploying the second thin wall graft member ~~completely~~ within the longitudinal lumen of the deployed first thin wall graft member and simultaneously deploying the first thin wall graft member until the first and second thin wall graft members completely overlap the lesion in the passageway of the patient's body at the desired site ~~are in a desired configuration within the passageway of the patient~~ to provide sufficient mechanical strength to provide a desired amount of support to the passageway of the patient's body at the preselected site.

Claim 12. (Previously presented): The method of claim 11 wherein second thin wall graft member extends longitudinally beyond the first thin wall graft member and engages the artery wall directly.

Claim 13. (Original): The method of claim 11 wherein the passageway of the patient has a curvature and the thin wall graft members are progressively deployed such that each added thin wall graft member is offset in the same longitudinal direction through the curvature of the patient's body passageway so that there are at least two layers of thin wall graft member over every portion of the preselected length of the patient's body passageway but each added thin wall graft member adds to the length of the graft in the amount of longitudinal offset and is sufficiently short in longitudinal length to absorb the curvature of the passageway without undue kinking or folding.

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Claim 14. (Currently amended): A kit comprising:

an endovascular graft having at least a first thin wall graft member having insufficient mechanical strength in a deployed state to provide a desired amount of support to a patient's body lumen and

a second thin wall graft member having insufficient mechanical strength in a deployed state to provide a desired amount of support to the patient's body lumen, the second thin wall graft member being configured to fit and be deployed completely within a longitudinal lumen of the first thin wall graft member to provide sufficient mechanical strength in the deployed state to support the patient's body lumen.

Claim 15. (Original): The kit of claim 14 wherein the first and second thin wall graft members configured to be deployed within a low profile delivery catheter system.

Claim 16. (Original): The kit of claim 15 wherein the first and second thin wall graft members are configured to be delivered through a delivery catheter system with a maximum distal outer transverse dimension of up to about 4 mm.

Claim 17. (Currently amended): An endovascular graft for supporting a preselected length of a patient's body lumen comprising:

a plurality of thin wall graft members that are linked so as to allow relative longitudinal movement and that are configured to be layered in a deployed state with at least two of the thin wall graft members having a length greater than the preselected length of the patient's body lumen;

, wherein one of the at least two thin wall graft members is configured to completely overlap the other of the at least two thin wall graft members, and

wherein no single thin wall graft member has sufficient mechanical strength in the deployed state to provide a desired amount of support for the preselected length of the patient's body lumen.

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Claim 18. (Original): The endovascular graft of claim 17 wherein the plurality of thin wall graft members are configured to be telescopically linked to allow for longitudinal extension during delivery and layering in a deployed state.